

REMARKS

§ 101 Rejections

In rejecting claims 1-17 under 35 U.S.C. 101, the Examiner states:

In the present case, independent claims 1, 9, 14, 16 and 17 do not involve transformation of article or physical object to a different state or thing, they merely recite associating queues with a data structure. Further, independent claims 1, 9, 14, 16 and 17 do not produce a useful, concrete, and tangible result, but merely maintain or display data, however no useful, concrete, and tangible result is created and stored for practicality. State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02.

Claims 1, 9, 14, 16 and 17 taken as a whole are directed to a mere method and program listing, i.e., to only its description or expression, is descriptive material per se, do not comprise a practical application as explained above hence are non-statutory.

Since the claimed invention, as a whole, does not comprise a practical application as explained above, claims 2-7, 10-13 and 15 which depend from claims 1, 9, 14, 16 and 17 respectively, are deemed to be directed to non-statutory subject matter.

In response, Applicant amends claim 1 to recite the step of “writing the database record only to an extent that is designated for storage of a database record.” This step yields a useful, concrete and tangible result.

Regarding claim 9, the step of “executing the I/O transaction,” for example, culminates in a substantially repeatable and predictable result. Accordingly, claim 9 produces a useful, concrete and tangible result.

Claim 14 relates to a “data storage system,” and claims 16 and 17 relate to a “computer-readable medium,” both of which are inherently useful, concrete and tangible subject matter. Accordingly, these claims are directed to statutory subject matter.

For at least these reasons, Applicant believes that claims 1, 9, 14, 16 and 17 recite statutory subject matter. Accordingly, Applicant requests the Examiner to withdraw the § 101 Rejections.

§ 112 Rejections

In rejecting the claims under 35 U.S.C. 112, the Examiner states:

Regarding claims 1, 9, 14, 16 and 17, claim 1 being exemplary, the phrase "data other than database records" is indefinite. It is not clear what constitutes data other than database records.

In response, Applicant amends claims 1, 9, 14, 16 and 17 to recite "ancillary data."
Support for "ancillary data" is found, for example, on page 5, paragraph 4, of the application.

Further, the Examiner states:

Second, the term "extent" is indefinite. It is not clear what are the metes and bounds of extent.

The Examiner may have overlooked the various descriptions of the term "extent" in the application. One such description is as follows:

*The user-data section 22 is itself divided into one or more data stores 32 for storing data records. These data stores 32 will also be referred to herein as "extents."*¹

Accordingly, "extent" is described in "full, clear, concise and exact terms"² in the application. For at least this reason, the term "extent" is definite.

The Examiner also states:

Similarly, the phrase, "certain extents" and "certain other extents" are indefinite. It is not clear what extents are referred to. Further regarding claim 9, the phrase "extent set" is indefinite. It is not clear what the metes and bounds of extent set are.

In response, Applicant amends claims 1 and 16 to recite "a first set of extents" and a "second set of extents."

For at least the same reason given for the term "extent" above, the term "extent set" is clear and proper as written.

The Examiner also states:

Regarding claims 12, 13, the term "overlap" is indefinite. It is not clear how extents may or may not overlap.

¹ Specification, page 5, paragraph 2

² 35 U.S.C. 112

The Examiner may have overlooked the following description of the term “overlap” in the application:

As used herein, a first and second extent are “overlapping” if the start address of the second extent precedes the end address of the first extent in an ordered address space. According to this definition, two identical extents are considered to be overlapping.³

As shown, “overlap” is described in “full, clear, concise and exact terms⁴” in the application. For at least this reason, the term “overlap” in claims 12 and 13 is definite.

Finally, the Examiner states:

Claims 1 and 16 recite the limitation “the basis” in the claims. There is insufficient antecedent basis for this limitation in the claim.

In response, Applicant amends claims 1, 12, 13 and 16 to provide antecedent basis.

§ 102 Rejection of independent claims 1 and 16

Turning to the art rejection, independent claim 1 stands rejected under 35 U.S.C. §102 as being unpatentable over *Furuike*.

Independent claim 1 recites a logical device associated with a data storage system having “a first set of extents that have been designated for storage of database records and a second set of extents that have been designated for storage of ancillary data.” For example, in FIG. 2 of the application, the logical device **18** has a first set of extents **32** for data records that are “optionally subjected to selected data verification steps” and a second set of extents **34** for “ancillary data” that is “not subject to the data verification steps.”⁵

In contrast, the cited portions of *Furuike* describe a database file **10** (FIG. 2) in which “[data] records [are classified] according to attributions based on ... definition data,” and the records are selectively decompressed based on the classification.⁶ To achieve this result, *Furuike* states:

³ *Specification*, Page 7, Paragraph 2

⁴ 35 U.S.C. 112

⁵ *Specification*, Page 5, Paragraphs 2-4

⁶ *Furuike*, Abstract and Column 3, lines 61-63

*The controller does not compress the data regarding the record group belonging to the attribution A, which is the record group being searched, but compresses data regarding the record groups belonging to the attributions B-E, which are the record groups other than the record group to be searched.*⁷

Accordingly, nothing in *Furuike* describes or suggests a logical device associated with a data storage system having “a first set of extents that have been designated for storage of database records and a second set of extents that have been designated for storage of ancillary data.”

For at least the same reason as claim 1, claim 1's progeny, and independent claim 16 together with its progeny are allowable.

§ 102 Rejection of independent claims 9, 14 and 17

Independent claims 9, 14 and 17 also stand rejected under 35 U.S.C. §102 as being unpatentable over *Furuike*.

Claims 9, 14 and 17 have limitations that differ from those of independent claims 1 and 16. In rejecting claims 9, 14 and 17, the Examiner advances reasons pertinent only to the limitations of claims 1 and 16.⁸ Because the limitations contained in claims 9, 14 and 17 have not been examined, the Action fails to comply with Rule 1.104(b). Accordingly, the Examiner cannot properly make the next Office Action final.

In any event, nothing in *Furuike* describes or suggests the limitations of these claims. For example, *Furuike* does not describe or suggest a storage device having “a plurality of extents ... each extent having a corresponding set of processing instructions associated [with each of the plurality of extents].” For at least this reason, claims 9, 14 and 17 are patentable over *Furuike*.

All claims dependent on 9, 14 and 17 are patentable for at least the same reasons as those claims.

⁷ *Furuike*, Abstract.

⁸ *Office Action*, Page 5.

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Conclusion


Any circumstance in which Applicant has (a) addressed certain comments of the Examiner does not mean that Applicant concedes other comments of the Examiner, (b) made arguments for the patentability of some claims does not mean that there are not other food reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that Applicant concedes any of the Examiner's positions with respect to that claim or other claims.

Now pending are claims 1-17, of which claims 1, 9, 14, 16 and 17 are independent.

No fees are believed to be due in connection with the filing of this response. However, to the extent any fees are due, or if a refund is forthcoming, please adjust deposit account 06-1050 referencing attorney docket "07072-159001."

Respectfully submitted,

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